

**REMARKS**

Reconsideration of the above-identified patent application is respectfully requested. Claims 1-13 and 15-20 were pending and have been examined on the merits. Claims 1, 5-6, 9, 16 and 18 have been amended and claim 2 has been cancelled, thus claims 1, 3-13 and 15-20 are still pending. No new matter has been added. Support for amended claims 1, 5-6, 9, 16 and 18 can be found in the Specification, at page 3, lines 8-9, page 6, line 16 to page 7, line 7 and in claim 2 as originally filed.

In the Office Action, claims 5-6, 9, 16 and 18 were rejected under 35 U.S.C. § 112, ¶ 1 as purportedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains to make and/or use the invention. In other words, claims 5-6, 9, 16 and 18 have been rejected as purportedly failing to comply with the enablement requirement.

Applicants respectfully traverse this rejection. Claims 5-6, 9, 16 and 18 have been amended herein to recite ranges including zero as a lower limit. *In re Mochel*, 470 F.2d 638, 176 USPQ 194 (CCPA 1974).

The ranges now recited in amended claims 5-6, 9, 16 and 18 are fully supported by the specification as filed (*e.g.*, Specification page 6 line 16 to page 7 line 7), thus, for the reasons set forth above withdrawal of the rejection of claims 5-6, 9, 16-18 under 35 U.S.C. § 112, ¶ 1 is respectfully requested.

Upon a telephone conversation with the undersigned, the Examiner's Supervisor Mr. V. Jagannathan agreed that Applicants should rely on the language at the bottom of page 10 of this Final Office Action to treat the rejections set forth in paragraphs 5-7 of the Office Action as obviousness rejections under 35 U.S.C. § 103(a).

**A. Krishnan (I) Does Not Render Obvious Applicants' Claims**

Claims 1, 3-6, 8-10, 12-13, 15-16, 18 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Krishnan et al. (U.S. Patent No. 6,444,022, hereinafter "Krishnan (I)") in view of *Hawley' Condensed Chemical Dictionary*. Applicants respectfully traverse this rejection.

The presently claimed invention is directed to a water-washable lithographic ink composition comprising, *inter alia*, rosin-based resins with an acid number of about 20 to about 250 which assist in the water washability of the resulting ink (*e.g.*, page 3, lines 7-10). In addition, the presently claimed composition comprises acid neutralizing agents which also contribute to solubilize in water the high acid number rosin-based resins (*e.g.*, page 4, lines 14-16). As such, the oil-soluble resins of the present invention are rendered water sensitive after having reacted with the acid neutralizing agent (*e.g.*, page 6, lines 7-14). In other words, neutralization of the acid groups of the resins renders the resins water washable and water sensitive.

Krishnan (I) teaches a water-based offset ink composition comprising, *inter alia*, water, a modified rosin polymer comprised of (i) resin soluble in water regardless of the pH of the water; (ii) resin rosin salts soluble in water at pH ranging from about 7.5 to about 10; and (iii) aqueous emulsion resins (*e.g.*, col. 3, lines 39-45).

To establish a *prima facie* case of obviousness of a claimed invention, three basic criteria must be met:

- 1) There must be some suggestion or motivation, either in the reference itself, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference;
- 2) There must be a reasonable expectation of success;

- 3) The prior art reference (or references combined) must teach or suggest all of the claimed limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art.

MPEP § 706.02(j).

Because the proposed combination fails to satisfy at least criteria (1), Applicants respectfully submit that no *prima facie* case of obviousness has been met and withdrawal of this rejection is respectfully requested.

Krishnan (I) discloses, teaches and suggests a water based ink composition comprising, *inter alia*, a modified rosin polymer as described above. In other words, Krishnan (I) does not disclose, teach or even suggest a water-washable ink composition comprising rosin-based resins with an acid number of about 20 to about 250 which can be solubilized in water with acid neutralizing agents to become water sensitive and water washable. On the contrary, Krishnan (I) discloses a modified rosin polymer which is soluble in water regardless of the pH of the water. Thus, there is no suggestion or motivation to modify the rosin polymer disclosed by Krishnan (I) to obtain the presently claimed water washable ink composition. In other words, one of ordinary skill in the art would not be motivated to neutralize with an acid neutralizing agent the rosin polymer disclosed Krishnan (I) to obtain a resin water sensitive and water washable.

Accordingly, it would not obvious to one skilled in the art to consider the presently claimed invention as an obvious variant of the ink composition disclosed by Krishnan (I).

As such, withdrawal of this rejection of claims 1, 3-8-10, 12-13, 15-16, 18 and 20 for being obvious under 35 U.S.C. § 103(a) is respectfully requested.

**B. Krishnan (II) Does Not Render Obvious Applicants' Claims**

Claims 1 and 3-20 were rejected under 35 U.S.C. § 103(a) as anticipated by Krishnan et al. (U.S. Patent No. 5,725,646, hereinafter "Krishnan (II)") view of Takayama et al. (U.S. Patent No. 6,313,066, hereinafter "Takayama"). Applicants respectfully traverse this rejection.

Krishnan (II) teaches and suggests a water-based offset ink comprising, *inter alia*, water and a macromolecular binder comprising: (i) macromolecular binders soluble in water regardless of the pH; (ii) macromolecular binders which are soluble in water only at a pre-determined pH value; and (iii) macromolecular binders comprising aqueous emulsions (*e.g.*, col. 3, lines 17-41, and col. 5, line 15).

Further, Krishnan (II) discloses either an acidic or basic pH value as the pre-determined pH suitable for solubilizing in water the macromolecular binders which are soluble only at a pre-determined pH.

Thus, as Krishnan (I) above, Krishnan (II) also fails to disclose, teach or even suggest all of Applicants' claimed limitations, and Takayama does not provide for the missing step. In other words, Krishnan (II) fails to disclose, teach or suggest a water washable composition comprising, *inter alia*, a rosin-based resin with an acid number of about 20 to about 250 and an acid neutralizing agent which solubilizes the resin in water and renders it water sensitive and water washable. On the contrary, Krishnan (II) discloses a water based ink composition comprising, *inter alia*, macromolecular binders soluble in water at a pre-determined acidic pH which can be reached with a mineral or organic acid such as acetic acid (*e.g.*, col. 3, lines 48-61).

Takayama teaches and suggests a decolorable image forming material comprising a color former, a developer and a binder resin, preferably a non-polar binder resin (*e.g.*, col. 3, lines 22-27 and lines 55-60, and col. 6, lines 5-67). In other words, Takayama teaches away from the

rosin-based resin of the present invention which is characterized by an acid number of about 20 to about 250 (*e.g.*, polarized groups). As such, for the reason set forth above the cited prior art alone or in combination does not render obvious the presently claimed ink composition and the withdrawal of the claims rejection under 35 U.S.C. § 103(a) is respectfully requested.

**C. Krishnan (II), Takayama and Pennaz Do Not Render Unpatentable**

**Claim 2**

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Krishnan (II) in view of Takayama as applied to claims 1 and 3-20 above, and further in view of Pennanz (U.S. Patent No. 5,338,351, hereinafter “Pennanz”). Applicants respectfully traverse this rejection. As an initial matter, claim 2 has been cancelled rendering this rejection moot.

However, as set forth above, the combination of Krishnan (II) in view of Takayama does not render unpatentable the presently claimed invention.

Pennaz discloses, teaches and suggests an ink composition which is substantially water insoluble at acidic pH conditions, and is printed at those conditions. Thus, Pennanz suggests avoiding pre-neutralizing the resins which should exist in the ink composition in their non-neutralized form (*e.g.*, col. 12, lines 26-33). Thus, Pennaz does not make up for the deficiency of the combination of Krishnan (II) with Takayama in that it does not teach a composition comprising, *inter alia*, a rosin-modified resin and a neutralizing agent. On the contrary, the teachings of Pennanz are not even compatible with the composition disclosed in Krishnan (II) in that the ink composition disclosed in Pennanz is printed at acidic pH conditions, while the compositions of Krishnan (II) comprises monoethanolamine. Accordingly, the teachings of Pennaz cannot even be successfully combined with the teachings of Krishnan (II) and Takayama.

For this reason, Applicants submit that the combination of the cited prior art does not render obvious amended claim 1. Thus, the withdrawal of the rejection over Krishnan (II) in view of Takayama and further in view of Pennaz under 35 U.S.C. § 103(a) is respectfully requested.

**D. Conclusion**

In light of the foregoing, all of the pending claims are now believed to be in proper condition for allowance and a Notice to that effect is respectfully requested. If this *AMENDMENT AFTER FINAL* does not otherwise result in the issue of such Notice, the Examiner is respectfully invited to contact the Applicants' undersigned counsel for an interview.

No extra fee is believed due. However, if any additional fees are necessary, the Director is hereby authorized to charge such fees or credit any overpayment to Deposit Account No. 50-0540.

Respectfully submitted,

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